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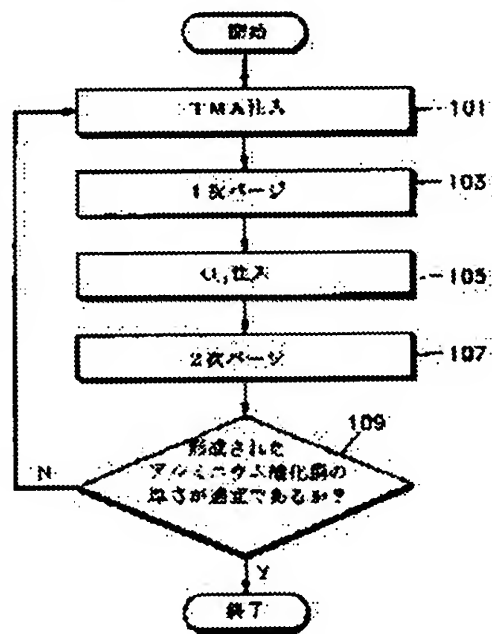
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(54) THIN FILM DEPOSITION METHOD USING AN ATOMIC LAYER VAPOR DEPOSITION METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a thin film deposition method using an atomic layer vapor deposition method.

SOLUTION: A first reactant containing an element to deposit a thin film and a ligand is poured into a reaction chamber containing a substrate and is purged, and next, a second reactant is poured and purged. Using a substance having bond energy with the element to deposit a thin film higher than that of the ligand, by the chemical reaction between the element to form into a thin film and the secondary reactant, a thin film is deposited, and moreover, the production of side-reactants is prevented. Alternatively, as the second reactant, a substance which does not contain a hydroxyl group is used, and after the purge of the second reactant, the same is again brought into reaction with a third reactant containing a hydroxyl group, by which the production of by-products of the hydroxyl group in the thin film is prevented. Alternatively, after the purge of the second reactant, for removing impurities and improving stoichiometry, the third reactant is poured and purged. In this way, the thin film which does not contain impurities and is also excellent in stoichiometry can be obtained.



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